

A new species of *Eccliseogyra* (Gastropoda: Nystiellidae) from southeastern Brazil

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ABSTRACT

A new species of *Eccliseogyra* from Brazil is described and compared to its most similar congeners: *E. exquisita* Bouchet and Warén, 1986, *E. folini* (Dautzenberg and de Boury, 1897), and *E. pyrrihas* (Watson, 1886).

Additional keywords: Mollusca, wentletrap, southwestern Atlantic, bathyal

INTRODUCTION

The genus *Eccliseogyra* has traditionally been placed in the family Epitoniidae. Clench and Turner (1952: 336–337) proposed the taxon Nystiellinae as a subfamily of Epitoniidae for epitoniid-like species with axially ribbed nuclear whorls that also show an abrupt change in sculpture with first protoconch whorl and “very different” radulae. Nutzel (1998: 89–92) considered the differences strong enough to raise the taxon to family status. Although some of the differences between the two families listed by Clench and Turner and Nutzel are not as clear-cut as they stated (Bouchet and Warén, 1986: 471, 481), I tentatively follow Nutzel’s allocation.

The genus *Eccliseogyra* is composed of deep-water species, usually with minute shells. Size and habitat make the acquisition of specimens difficult, and species are rare in collections. The genus is represented in the western Atlantic by four species: *E. formosissima* (Jeffreys, 1884), *E. nitida* (Verrill and Smith, 1885), *E. periformosa* (de Boury, 1917), and *E. pyrrihas* (Watson, 1886). Other species have been described from the eastern Atlantic (Bouchet and Warén, 1986). However, as was the case with *Eccliseogyra formosissima*, which was discovered off the coast of Louisiana in the Gulf of Mexico (García, 2003), there is a strong possibility that other eastern Atlantic species of *Eccliseogyra* will be found in the western Atlantic.

The *Eccliseogyra* species described herein was collected off the southeastern coast of Brazil in May, 1987, during cruise MD55 of the R/V MARION-DUFRESNE, operated by Terres Australes et Antarctiques Françaises. It

was a joint project of Muséum National d’Histoire Naturelle, in Paris (MNHN; chief scientist Alain Guille) and Universidade Santa Ursula, in Rio de Janeiro (USU; chief scientist Janete M. Ramos). Malacologists on board were Philippe Bouchet, José H. Leal, and Bernard Métivier. The cruise generated many new discoveries of deep-sea biota, including crustaceans (e.g. Manning et al. 1989; Watling and Gerken, 1999), mollusks (e.g. Leal and Bouchet, 1989; Houart 1991; Verhecken 1991; Absalao and Pimenta 2003), and echinoderms (e.g. Albuquerque et al., 2001).

The new *Eccliseogyra* species is most similar to three Atlantic Ocean congeners; *E. exquisita* Bouchet and Warén, 1986 and *E. folini* (Dautzenberg and de Boury, 1897), recorded from the eastern Atlantic, and *E. pyrrihas* (Watson, 1886), from the western Atlantic.

The material representing the new species is deposited at the Muséum National d’Histoire Naturelle, Paris (MNHN), and Museu de Zoologia da Universidade de São Paulo (MZSP). Another abbreviation used in the text is: dd = empty shells.

SYSTEMATICS

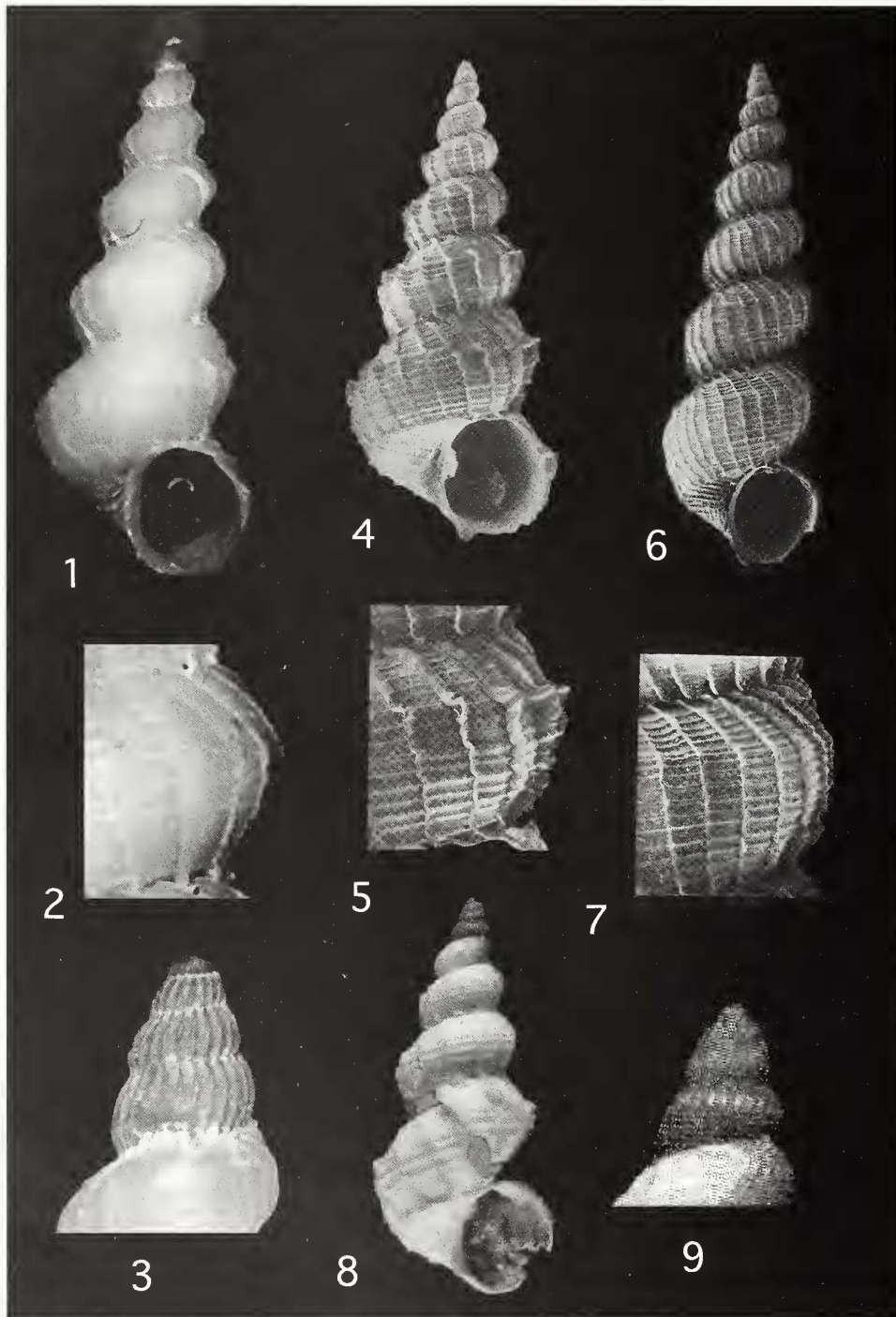
Family Nystiellidae Clench and Turner, 1952

Genus *Eccliseogyra* Dall, 1892

Type Species: *Delphinula nitida* Verrill and Smith, 1885 by original designation.

***Eccliseogyra brasiliensis* new species**
(Figures 1–3)

Description: Holotype (Figures 1–3) 8.7 mm in length, thin, rather widely turriculate (width/length ratio 0.40). Protoconch conical, dark amber in coloration, with nucleus damaged; remaining 3.5 whorls axially ribbed (Figure 4); ribs sigmoid, as wide as interspaces; interspaces spirally striated. Teleoconch of 6 whorls; early whorls strongly convex; subsequent whorls shouldered, roundly angular at periphery. Suture incise. Axial sculpture of widely spaced, low, thin, frilled lamellae; lamellae crossing over suture, some only slightly



Figures 1-9. *Ecliscogyra* species. **1-4.** *Ecliscogyra brasiliensis* new species, holotype MNHN 24428, southeastern Brazil, 21°35' S, 40°31' W, 900 m, MD55, sta. CB98, length 8.7 mm, width 3.5 mm. **5-6.** *Ecliscogyra exquisita* Bouchet and Warén, 1986; holotype, Canary Ids., CANCAP st. 4.063; 28°49' N, 13°42' W, 875 m, after Bouchet and Warén, 1986, figs. 1147-1148, 6.9 mm. **7-9.** *Ecliscogyra folini* (Dautzenberg and de Boury, 1897), lectotype, MONACO st 703; 39°21' N, 31°06' W, 1360 m. After Bouchet and Warén, 1986, figs. 1143-1144, 9.1 mm.

peaked at shoulder on last whorl, 20 on penultimate whorl. Spiral sculpture of low, rounded cords; cords of uneven strength, unevenly spaced, weaker below periphery of whorl, not crossing over axial lamellae,

about 8 main cords on penultimate whorl. Basal disk posteriorly delineated by weak ridge, ornamented with continuation of axial lamellae and obsolete spiral cords. Umbilicus deep, very narrow. Aperture holostomatous,

subcircular; lip thin; inner lip slightly expanding over umbilical area. Shell white, somewhat glossy. Operculum pale yellow, translucent.

Type Material: Holotype MNHN 24428, length 8.7 mm, width 3.5 mm, MD55, sta. CB98; Paratypes: Paratype 1, MNHN 24429, 21°36' S, 39°58' W, 1199–1295 m, 11.4 mm, MD55, sta. CB99; paratype 2, MNHN 24430, 19°38' S, 38°43' W, 960 m, 10.5 mm, MD55, sta. CB95; paratype 3, MNHN 24431, 18°59' S, 37°48' W, 1540–1550 m, 3 mm, MD55, sta. DC70; paratype 4, MNHN 24432, 19°36' S, 38°53' W, 640 m, 9.6 mm, MD55, sta. CB93; paratype 5, MNHN 24433, 19°41' S, 37°48' W, 790–940 m, 11.8 mm, MD55, sta. CB77; paratype 6, MZSP 100523, 21°35' S, 40°31' W, 900 m, 10 mm, MD55, sta. CB98.

Type Locality: Southeastern Brazil, 21°35' S, 40°31' W, 900 m, MD55, sta. CB98.

Other Material Examined: 19°41' S, 37°48' W, 790–940 m, MD55, sta. CB77 (2 dd.); 23°47' S, 42°10' W, 610 m, MD55, sta. CB105 (5 dd); 21°35' S, 40°31' W, 900 m [MD55, sta. CB98] (10 dd).

Distribution: Southwestern Brazil, from 18°59' S to 21°36' S and from 37°48' W to 40°31' W, in 640 to 1550 m.

Remarks: The angular whorls and narrow umbilicus separate the new species from most Atlantic Ocean species of *Ecclisogyra*. From the eastern Atlantic, only *Ecclisogyra exquisita* Bouchet and Warén, 1986 (Figures 4–5) and *E. folini* (Dautzenberg and de Boury, 1897) (Figures 6–7), share these characters. *Ecclisogyra exquisita* is smaller, growing to only 6.9 mm, has 6 teleoconch whorls, a protoconch of only 2.5 whorls (vs. 3.5+ for *E. brasiliensis*), and more obvious shoulder spines (Figure 8). *Ecclisogyra folini* is proportionately narrower (width/length ratio 0.30), has more axial lamellae, more defined spiral cords that keep their strength below the periphery of the whorls, and a more strongly sculptured basal disk.

The western Atlantic species *Ecclisogyra pyrrias* (Watson, 1846) (Figures 8–9; also see Bouchet and Warén, 1986, fig. 1149) is the most similar. It differs from *Ecclisogyra brasiliensis* in the following features:

1. It has approximately 8 whorls at 8.3 mm; the holotype of the new species has 6 whorls at 8.7 mm, and the largest specimen of *E. brasiliensis* examined (paratype 5), which measures 11.8 mm, has only 7.5 whorls.
2. Its protoconch has more convex whorls (compare Figures 3 and 9). Besides the figured protoconch of the holotype, paratype 3, which also has an almost intact protoconch, has the same outline; several other specimens with damaged protoconchs lack the distinctive strongly convex outline of the last whorl of the protoconch of *E. pyrrias*.
3. Although teleoconch whorls of juvenile specimens of *Ecclisogyra pyrrias* and *E. brasiliensis* are very similar, *E. pyrrias* lacks the spiral ornamentation pos-

terior to the periphery that is present in the new species, and the adult whorls in the latter species are more angular, with a more defined, more concave basal disk.

Etymology: Named for the country in which it was collected.

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